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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,456	02/28/2002	Toshiaki Kobayashi		4972

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EXAMINER	
PENG, KUO LIANG	

ART UNIT	PAPER NUMBER
1712	3

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/084,456	KOBAYASHI ET AL.	
	Examiner	Art Unit	
	Kuo-Liang Peng	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/28/02 Priority paper* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 10* is/are rejected.

7)☒ Claim(s) *1-5,8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim objection

1. Claims 1-5 are objected to because of the following informalities:

In Claim 1 (line 3), after "thereof", should there be -- in a mold cavity --?

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Zank (US 6,252,030).

Zank discloses a molding prepared from a hydrosilylated polymer obtained by reacting a hydridosilsesquioxane compound having a structure of formula 1 with a divinylsiloxane compound having a structure of formula 2 (col. 3, lines 31-63 and col. 4, lines 6-29). Zank is silent on the molding process. However, Claims 1-5 are product-by-process claims. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious

from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process" In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). "The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983) "[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1,4, 6 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zank (US 6,252,030) in view of Merriam-Webster (Merriam-Webster's Collegiate Dictionary, 10th Ed., (1993)) and Ishida (US 6,271,297).

Zank discloses a molding prepared from a hydrosilylated polymer obtained by reacting a hydridosilsesquioxane compound having a structure of formula 1 with a divinylsiloxane compound having a structure of formula 2 (col. 3, lines 31-63 and col. 4, lines 6-29).

The difference between Zank and the present invention is the requirement of a) molding the hydrosilylated polymer in a mold cavity; b) heating the hydrosilylated polymer at a temperature higher than the softening point or melting point thereof, preferably at a temperature of 50 to 250°C.

With respect to a), as mentioned previously, Zank discloses a molding material for making a molded article (col. 4, lines 15 and 26). Merriam-Webster defines the word "molding" as "an object produced by molding", the verb "mold" as "to form in a mold" and the noun "mold" as "a cavity in which a substance is shaped" (page 749). The motivation of putting a substance in a mold cavity is to form a molding. In light of the benefit mentioned above, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce

Zank's molded article (i.e., a molding) in a process comprising a step of putting Zank's hydrosilylated polymer in a mold cavity.

With respect to b), Ishida teaches that polysiloxanes are typically processed above their glass transition temperature (i.e., softening point) or above their melting point in a molding process. The motivation is to facilitate the molding process (col. 2, line 51 to col. 3, line 28). It is further noted that the temperature at which the polysiloxane is heated will affect how the polysiloxane flows in the mold. A proper flow of the polysiloxane is needed to ensure the cavity of the mold is adequately filled. In other words, the temperature at which the polysiloxane is heated is a result-effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, during the molding process, to heat Zank's hydrosilylated polymer above its softening point or above its melting point, and further through routine experimentation to use whatever heating temperature in order to obtain a proper flow of the hydrosilylated polymer in the mold, especially Applicants do not show the criticality of the heating temperature range of 50 to 250°C. See MPEP 2144.05 (II).

6. Claim 2 and 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zank in view of Merriam-Webster and Ishida as applied to claims 1,4, 6 and 9 above, and further in view of Cekada (US 3,624,190).

The difference between Zank in view of Ishida and the present invention is the requirement of heating the hydrosilylated polymer under a reduced pressure.

Zank further discloses that hydrosilylation reaction will generate hydrogen gas as a by-product (col. 4, lines 52-58). Furthermore, Cekada teaches that typically during molding, heat

and reduced pressure can be applied. The motivation of applying reduced pressure is to ensure complete removal of any volatiles (col. 7, lines 8-16). In light of the benefit mentioned above, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply reduced pressure during the molding process of Zank in view of Merriam-Webster and Ishida.

Should Applicants argue that Cekada is a non-analogous art for the purpose of rejection, Applicants are referred to MPEP 2141.01(a) which states that a reference may be relied on as a basis for rejection of an applicant's invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Therefore, although Cekada is from different fields than that of the current application, it discloses the application of the heat and reduced pressure to eliminate the volatiles in a molding process, which is especially pertinent to the invention at hand.

7. Claims 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Zank in view of Ishida, optionally further in view of Cekada does not teach or fairly suggest heating the polymer in the specific steps set forth in the instant claim.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (703) 306-5550. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson, can be reached on (703) 308-2340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kuo-Liang Peng

May 1, 2003